

plate  
heat  
exchangers



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HRS   
international



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# Plate Heat Exchanger



HRS has many years experience in the field of heat transfer and all aspects of design and calculation of equipment. Consistent development in the field of sealed plate heat exchangers has resulted in a wide range of plate versions with respect to surface structure, materials and gaskets.

The high-performance plates from HRS provide the optimum heat exchanger for every thermal problem. High heat transfer coefficients and thus best possible utilisation of the surface guarantee a compact, low price solution to the problem. Plate heat exchangers offer additional flexibility, by changing the number of plates, the heat exchanger can also be adapted to other thermal operating conditions.





## High performance

Applications range from heating and cooling of liquids to gas cooling and condensation. Heat recovery is currently another important economic factor and is becoming increasingly significant.

HRS is certified in accordance with ISO 9001. All designs have preliminary approval from TUV (Germany Technical Inspectorate) and comply with the appropriate inspection and acceptance regulations such as LRS, DNV, BV, GL and ASME.



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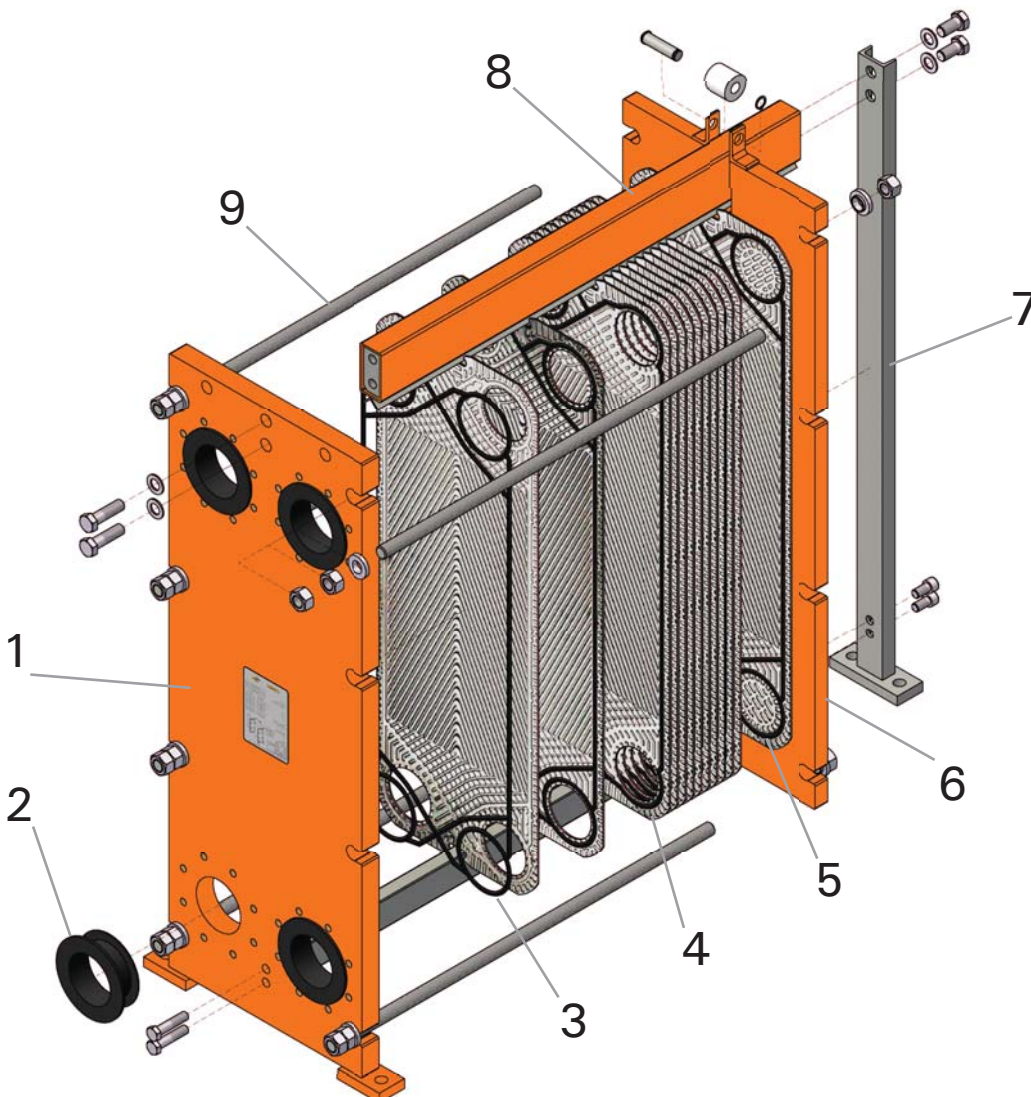


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# Manufacturing

With the variety of heat transfer plates and flow gaskets we are able to supply heat exchangers with a maximum design temperature of 200°C and design pressure of 25 bar.



## Plate Heat Exchanger

1. Fixed front plate
2. Nozzle liner
3. Full 'D' gasket
4. Plate pack
5. End plate
6. Mobile pressure plate
7. Back leg
8. Carrier bars
9. Tie bars



## The Heat Transfer Plate



The heat transfer plates are characterised by optimum embossing, resulting in high heat transfer coefficients. Variable flow gaps can be generated by a result of the different types and angles of embossing. Heat transfer plates are supplied as standard in material grades AISI 304 or AISI 316 and depending on the operating conditions high grade materials may be offered such as 245 SMO and titanium.

All plates are provided with a double gasket at the ports which prevents mixing of the two media. For safety reasons, the gasket is also provided with a outer leakage groove at the ports. If one of the two gaskets fails and starts to leak, the medium passes to atmosphere. All plate heat exchangers can be supplied with following gasket materials;






NBR  
EPDM  
Viton



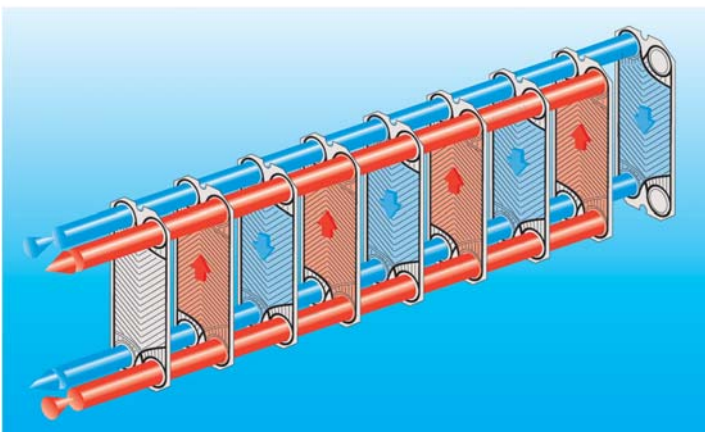


# Technical Data

HRS plate heat exchangers can be supplied with all of the usual connections for all fields of application (Industrial, building services, chemicals, food). Alternative materials and welded designs are also available, subject to approval and feasibility.

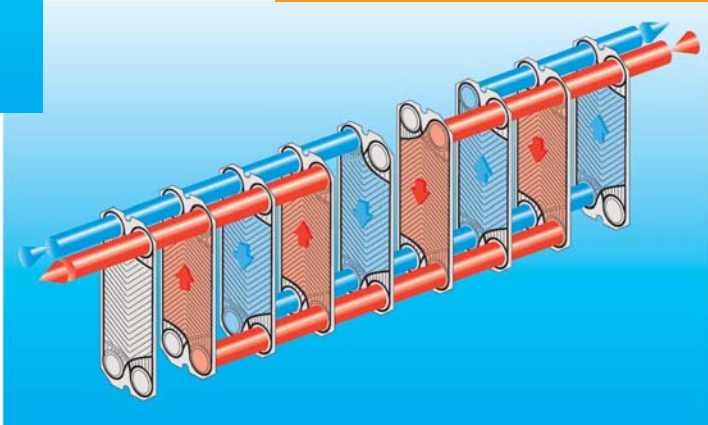
					
	Threaded connection	Moulded rubber part	Metal lining	Connection with loose flange	Flange connection
HRS 04/08	•	—	—	•	•
HRS 14/20	•	—	—	•	•
HRS 19/3140/50	—	•	•	•	•
HRS 41/60/80	—	•	•	•	•
HRS 45-130	—	•	•	—	—
HRS 80-250	—	•	•	—	—
HRS 200	—	—	•	—	—

● = available, — = not available  
 Other connections or bolts on request



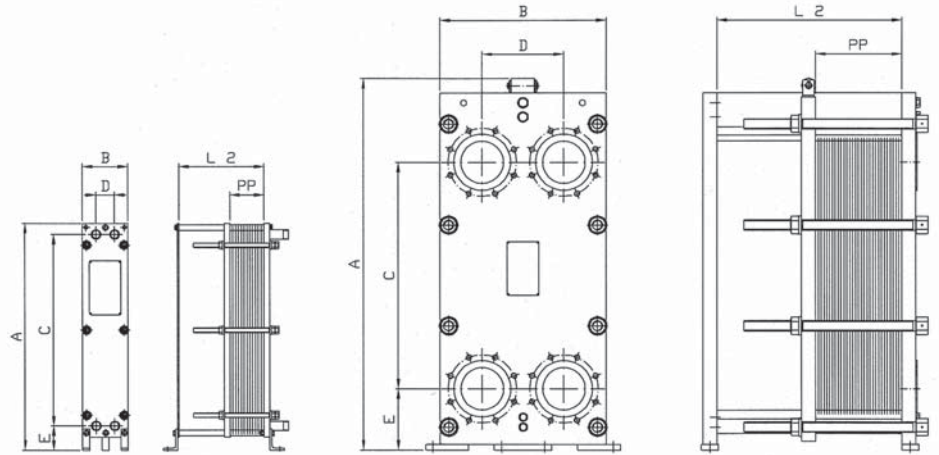
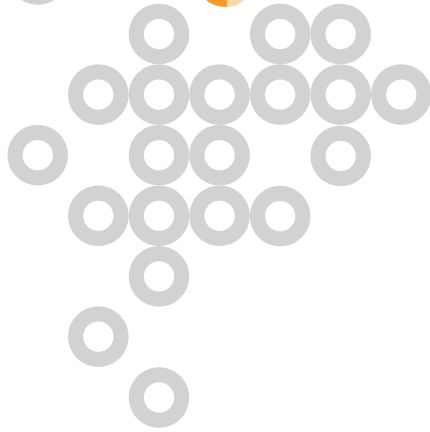
**Multi-pass design**  
 Multi-pass allows for better thermal efficiency and replaces the need for multiple units. Connections are on the fixed plate as well as on the pressure plate.

**Single-pass design**  
 With this design both media is in counter flow. All connections are on the fixed plate which allows the unit to be serviced without disturbing the pipework.





# Dimensions



frame/ Pressure rating	max. number of plates	surface/plate m <sup>2</sup>	A mm	B mm	C mm	D mm	E mm	L2 mm	PP mm	connections	max. surface m <sup>2</sup>
HRS 04-10/16	125	0.04	460	160	336	65	85	150-600	NoPx 2.4	1"	5
HRS 08-10/16	150	0.08	799	160	675	65	85	150-600	NoPx 2.4	1"	12
HRS 14-10/16	200	0.14	837	310	590	135	132	250-1000	NoPx 2.4	2"	28
HRS 19-10/16	500	0.20	1060	440	650	202	200	500-3000	NoPx 3.1	DN 80	100
HRS 20-10/16	200	0.20	1066	310	819	135	132	250-3000	NoPx 2.4	2"	40
HRS 31-10/16	500	0.30	133	480	894	225	184	500-3000	NoPx 3.1	DN 100	150
HRS 40-10/16	500	0.40	1579	480	1141	225	184	500-3000	NoPx 3.1	DN 100	200
HRS 50-10/16	500	0.50	1826	480	1388	225	184	500-3000	NoPx 3.1	DN 100	250
HRS 41-10/16	700	0.40	1470	610	941.4	290	205	500-4000	NoPx 3.5	DN 150	280
HRS 60-10/16	700	0.60	1835	610	1306.2	290	205	500-4000	NoPx 3.5	DN 150	420
HRS 80-10/16	700	0.80	2200	610	1671	290	205	500-4000	NoPx 3.5	DN 150	560
HRS 43-10/16	700	0.43	1403	760	791	395	291	500-3500	NoPx 3.1	DN 200	300
HRS 65-10/16	700	0.65	1703	760	1091	395	291	500-3500	NoPx 3.1	DN 200	455
HRS 100-10/16	700	1.00	2103	760	1489	395	291	500-3500	NoPx 3.1	DN 200	700
HRS 130-10/16	700	1.30	2503	760	1891	395	291	500-3500	NoPx 3.1	DN 200	910
HRS 80-10/16	700	0.80	1907	980	1080	480	335	500-4000	NoPx 4.1	DN 300	560
HRS 120-10/16	700	1.20	2317	980	1490	480	335	500-4000	NoPx 4.1	DN 300	840
HRS 187-10/16	700	1.87	2947	980	2120	480	335	500-4000	NoPx 4.1	DN 300	1310
HRS 250-10/16	700	2.50	3677	980	2750	480	335	500-4000	NoPx 4.1	DN 300	1750
HRS 200-10/16	700	2.00	2855	1370	1822	672	450	500-4000	NoPx 4.1	DN 500	1400